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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/732,992	12/11/2003	Shyam Kumar Verma	208-6139CT	8307

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EXAMINER
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KHAN, AMINA S

ART UNIT	PAPER NUMBER
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1751

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/732,992

Applicant(s)

VERMA ET AL.

Examiner

Amina Khan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 37-92 is/are pending in the application.
- 4a) Of the above claim(s) 37-42, 79-88 and 92 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 43-78 and 89-91 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 37-92 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/11/2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 37-42 and 88, drawn to processes for inhibiting corrosion with solutions containing ammonia, classified in class 422, subclass 7.
  - II. Claims 79-84 and 92, drawn to drawn to processes for inhibiting corrosion with solutions containing hydroxides, classified in class 422, subclass 7.
  - III. Claims 43-78, and 89-91, drawn to anti-corrosion compositions comprising hydroxides, classified in class 252, subclass 68.
  - IV. Claims 85-87, drawn to anti-corrosion compositions comprising ammonia, classified in class 252, subclass 68.
2. Inventions I and IV are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the process for inhibiting corrosion of a machine can be practiced with non-ammonia absorption solutions.
3. Inventions II and III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different

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process of using that product (MPEP § 806.05(h)). In the instant case the process for inhibiting corrosion of a machine can be practiced with non-hydroxide absorption solutions.

4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Michael Sajovec on September 9, 2005 a provisional election was made without traverse to prosecute invention III, claims 43-78, and 89-91. Affirmation of this election must be made by applicant in replying to this Office action. Claims 37-42, 79-88 and 92 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### ***Specification***

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 43-78 and 89-91 are rejected under 35 U.S.C. 103(a) as being obvious over Verma et al. (US Patent #6,004,476).

4. The prior art of Verma et al. teaches absorption solutions with corrosion inhibiting effects (column 2, lines 29-32) comprising lithium hydroxide (column 6, lines 4-7), at least one heteropoly complex ion of transition metal element (column 2, 21-24) and at least one additional additive (column 2, lines 32-35) as claimed in claims 43-45, 64, 72 and 75. Verma further teaches the claimed heteropoly complex ions (column 3, lines 15-48) of the formulas claimed in claim 46, where X is phosphorous, manganese, tellurium or arsenic (column 3, line 67; column 4, line 1) and M is molybdenum or tungsten (column 4, lines 45-47) as claimed in claim 47. Verma further teaches heteropoly complex anion selected from phosphomolybdates of the formula  $[\text{PMo}_{12}\text{O}_{40}]^{-3}$ , silicon molybdates, silicon tungstates, tellurium molybdates, arsenic molybdates, and mixtures thereof (column 4, lines 14-29) as claimed in claims 48 and 49.

5. Verma further teaches additional transition metal salts which are different from the transition metals of the heteropoly anion complex, where the metal is chosen from cobalt, nickel, tungsten, zirconium, manganese and chromium and the salts are chosen from nitrates, halides, and oxides (column 4, lines 50-61) as claimed in claims 50-56.

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6. Verma further teaches additional additives which are salts of metallic elements of Groups IIIa to VIa where the salts are chosen from oxides, sulfides, nitrates, or halides and the metals may be antimony and the compound may be antimony bromide, germanium bromide, arsenic bromide, and bismuth bromide (column 4, lines 62-67; column 5, lines 1-10) as claimed in claims 57-63.

7. The teachings of Verma recited above encompass the compositions recited in the instant claims 65-78, 89 and 90. Verma further teaches group Va elements would be present in concentrations from 100ppm to 3000ppm (column 5, lines 14-26) as claimed in claim 91.

8. The prior art differs from the instant application in that it does not teach with sufficient specificity 20-80% alkali hydroxide present in the composition. The prior art does disclose that enough lithium hydroxide be present to adjust the alkalinity of the solution pH at a level that optimized the performance of each chemical, therefore the broad teachings of Verma et al encompass 20 to 80%. It would have been obvious to one of ordinary skill in the art at the time of invention to arrive at compositions comprising 20-80% lithium hydroxide.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amina Khan whose telephone number is (571) 272-5573. The examiner can normally be reached on Monday through Friday, 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on (571) 272-1316. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Amina Khan, PhD  
Patent Examiner  
September 16, 2005



**JOHN HARDEE**  
**PRIMARY EXAMINER**